WHAT IS CLAIMED IS:

1. A water heating system comprising:

a water storage vessel;

a water circuit circulating water from at least one inlet in fluid communication with said storage vessel to at least one outlet in fluid communication with said storage vessel;

a first heat exchanger operably disposed in said water circuit;

at least one second heat exchanger operably disposed in said water circuit; and

a vapor compression system defining a refrigerant circuit for circulating a refrigerant and said vapor compression system comprises:

a first compressor mechanism and a second compressor mechanism, said first compressor mechanism compressing a refrigerant from a suction pressure to an intermediate pressure, said second compressor mechanism compressing the refrigerant from the intermediate pressure to a discharge pressure;

said first heat exchanger being operably disposed in said refrigerant circuit between said first and second compressor mechanism wherein intermediate pressure refrigerant heats water circulating in said water circuit;

an expansion device operably disposed in said refrigerant circuit, reducing the pressure of said refrigerant;

an evaporator operably disposed in said refrigerant circuit between said expansion device and said first compressor mechanism; and wherein

said at least one second heat exchanger is operably disposed in said refrigerant circuit between said second compressor mechanism and said expansion device wherein refrigerant heats water in said fluid circuit.

2. The water heating system of claim 1 wherein said vapor compression system further comprises an internal heat exchanger transferring thermal energy between refrigerant at first and second locations, said first location disposed between said at least one second heat exchanger and said expansion device, said second location disposed between said evaporator and said first compression mechanism.

3. The water heating system of claim 1 wherein said at least one second heat exchanger includes a primary heat exchanger and a secondary heat exchanger.

4. The water heating system of claim 3 wherein said primary and secondary heat exchangers are disposed in series in said refrigerant circuit.

5. The water heating system of claim 1 wherein said refrigerant comprises carbon dioxide and said second compressor mechanism compresses said refrigerant to a supercritical discharge pressure.

6. The water heating system of claim 1 further comprising at least one pressure relief valve operably disposed in said refrigerant circuit between said second compressor mechanism and said expansion device.

7. The water heating system of claim 1 wherein said water storage vessel, said first heat exchanger and said at least one second heat exchanger are disposed in a building interior and wherein said first and second compressor mechanisms and said evaporator are disposed in an exterior location.

8. The water heating system of claim 1 further comprising a pump positioned in said water circuit, said pump affecting the circulation of water through said water circuit.

9. A method of heating water, said method comprising:

providing a water storage vessel;

providing a first compressor mechanism and a second compressor mechanism;

compressing a refrigerant comprising carbon dioxide from a suction pressure to an intermediate pressure in said first compressor mechanism;

compressing the refrigerant from the intermediate pressure to a supercritical discharge pressure in said second compressor mechanism;

circulating water through a first heat exchanger, heating the water with the intermediate pressure refrigerant in said first heat exchanger, and communicating the water heated in said first heat exchanger to said storage vessel; and

circulating water through a second heat exchanger, heating the water with the supercritical pressure refrigerant in said second heat exchanger, and communicating the water heated in said second heat exchanger to said storage vessel.

10. The method of claim 9 further comprising:

reducing the pressure of the refrigerant in an expansion device after cooling the refrigerant in the second heat exchanger;

heating the refrigerant in an evaporator after reducing the pressure of the refrigerant in the expansion device; and

communicating the refrigerant to said first compressor mechanism after heating the refrigerant in said evaporator.

11. The method of claim 10 further comprising the step of exchanging thermal energy in a heat exchanger having a first refrigerant passageway operably disposed between said second heat exchanger and said expansion device and a second refrigerant passageway operably disposed between said evaporator and said first compression mechanism.